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Towards a Smog Plan for Ontario

Summary of June 19th and 20th, 1996 Stakeholders Workshop

July, 1996

Ontario Ministry of Environment and Energy

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Appendix A Workshop Agenda
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Figure 1:
Phases in Ontario's Smog Plan Initiative

Phase I: **Organization and Development - February - June, 1996**
Ontario's Ministry of Environment and Energy develops the Initiative, prepares a discussion paper and drafts technical documentation, organizes focus groups, and develops plans for planning Workshop.

Phase II: **Launch Collaborative Action Planning Process - June, 1996**
MOEE releases discussion paper, technical documentation and develops participants' Work Book. *"Towards a Smog Plan for Ontario: Workshop"* convened to develop goals for our Smog Plan and a generic framework for sectoral and company Smog Plans. This phase includes obtaining support from all sectors for Ontario's collaborative, Smog Planning approach, through:

- ***setting goals and objectives for the Smog Plan;***
- ***developing strategies for ensuring that all stakeholders are included; and***
- ***forming working groups and a Smog Plan Steering committee.***

Phase III: **Develop Sectoral/Sub-sectoral/Company Smog Plans - June - October 1996**
Collaborative sectoral action plans for smog reduction will be prepared for the time period 1997 - 2015.

Phase IV: **Create a Smog Plan for Ontario - November - December, 1996**
The Steering Committee will combine sectoral action plans to craft a Smog Plan for Ontario.

Phase V: **Staged Implementation of the Smog Plan for Ontario - 1997-2015**

Workshop Purpose and Format

The purpose of the workshop was two-fold:

- to develop a goal for smog reduction in Ontario by 2015; and
- to outline a framework and approach to developing sector smog plans.

The workshop program was specifically designed to enable stakeholders to share ideas, challenges and opportunities for reducing smog. The agenda featured a mix of plenary presentations, success stories and breakout sessions, including:

- opening remarks by the Honourable Brenda Elliott, Ontario Minister of Environment and Energy, who introduced Ontario's smog plan initiative and encouraged stakeholders to work together to take action on smog reduction;

- panel presentations by scientific, health and government leaders on the current state of knowledge about the smog problem;

- presentation of smog reduction success stories by industry and government leaders;

- multi-sectoral breakout sessions to discuss Ontario goals and targets for smog reduction;

- sectoral breakout sessions to develop sectoral frameworks for smog reduction action plans.

A copy of the workshop agenda is included in Appendix A.

> *"We welcome each one of you as partners...*
> *your support and commitment is vital.*
> *What you are about to accomplish in this workshop*
> *is vital to the health of our province."*
>
> *The Honourable Brenda Elliott, Ontario Minister*
> *of Environment and Energy*

Workshop Participants

The workshop brought together a diverse mix of over 170 stakeholders from across Ontario, Quebec, Atlantic Canada, and the United States. While workshop participants were drawn from different sectors -- municipal, provincial and federal government; non-government and community organizations; industry and business; researchers and consultants; and academia -- all had a common interest in sharing information and discussing opportunities for smog reduction.

A complete list of workshop participants is contained in Appendix B.

Key Background and Workshop Materials

To introduce Ontario's smog plan initiative and assist stakeholders in preparing for the workshop, MOEE prepared two documents: *"Towards a Smog Plan for Ontario - a Discussion Paper"* and *"Supporting Document for Towards a Smog Plan for Ontario - a Discussion Paper"*. These documents were circulated to participants prior to the workshop, along with *"Towards a Smog Plan for Ontario: Participants' Workbook"*, developed by the workshop facilitators (LURA Group) for use by participants before and during the workshop.

In addition, an on-site newsletter entitled *Action on Smog* was prepared to summarize and synthesize the results of the first day of the workshop, and was made available to workshop participants on the morning of June 20th. A copy of the newsletter is included in Appendix C.

Workshop Report

This report provides a summary and synthesis of the workshop presentations and plenary and breakout group discussions. The report also identifies key themes, issues, observations and conclusions raised during the meeting. It is intended to serve as a summary, suitable for distribution to and verification by workshop participants.

Following this Introduction, Section 2 provides an "at-a-glance" summary of the key workshop outcomes. Section 3 includes a brief summary of the panel presentations on the current state of knowledge about the smog problem, and sectoral success stories. Sections 4 and 5 summarize participants' deliberations on a goal and targets for Ontario's Smog Plan, and planning frameworks for sectoral smog reduction action plans. Finally, Section 6 presents recommendations from participants on the process for developing Ontario's Smog Plan.

2. Workshop Highlights - Key Outcomes "At a Glance"

Where Are We Now?

Significant progress has been made both in terms of our understanding of the smog problem and its effects, and in taking action to address the problem. However, more can and must be done to achieve further smog reduction. There is still much to learn about smog and its effects, particularly with respect to inhalable and respirable particulates.

A Commitment to Collaborative Action on Smog

During the workshop, participants expressed a strong willingness to work together and share information to develop Ontario's Smog Plan. A clear sense emerged from the meeting that while many stakeholders are now involved in smog reduction initiatives, additional actions are needed to address the problem and *all* stakeholders from each sector of society need to be involved.

Towards a Goal and Targets for Smog Reduction in Ontario

Generally, there was support for an aggressive set of goals for Ontario, built from what sectors could realistically achieve, and based on a fair and equitable approach. An explicit percentage reduction target for NOx, VOC, IP/RP reductions was thought to be helpful *after* the sectoral action plans had been developed. Much more data, including risk assessments and sources are needed on particulates before a credible target for IP/RP can be set.

Area Work Group Action Plan Frameworks

Participants in four broad sectoral breakout sessions -- transportation; heavy industry and energy services; manufacturing and consumer products; and public education and government -- developed smog reduction action planning frameworks best suited for sectoral needs and circumstances. These frameworks were developed based on action planning "success factors" identified by workshop participants, and are comprised of step-by-step iterative processes for achieving smog reduction.

Next Steps for Ontario's Smog Planning Process

Workshop participants provided a series of recommendations for the next steps in developing Ontario's Smog Plan. Central among these were recommendations to: clarify the process steps for Smog Plan development (including time-lines and outcomes); link the Smog Plan initiative with other similar ongoing initiatives (such as the CCME NOx/VOCs process); and provide an explicit role for health, public education and technical experts in the process.

3. Where Are We Now?

Over the years, significant progress has been made both in terms of our understanding of the smog problem and its effects, and in taking action to address the problem. This progress was illustrated by the speakers during the plenary presentation sessions of the workshop. A recurring theme during these presentations was that while significant progress has be made, more can and must be done to achieve further smog reduction. Similarly, many speakers pointed out that there is still much to learn about smog and its effects, particularly with respect to inhalable and respirable particulates (IP/RP).

3.1 Our Current Understanding of The Smog Problem

Four respected panellists shared their knowledge and perspectives on the current state of the smog issue. Each endorsed Ontario's proposed collaborative approach to developing the province's Smog Plan.

Dr. Harold Schiff - President, Unisearch

The extent and effect of ground level ozone depends on the amount and relationship between two key ingredients: hydrocarbons and NOx. If there is an increase in hydrocarbons, ground level ozone will increase. If there is an increase in NOx, the amount of ozone may increase or decrease locally depending on the ratio of hydrocarbons to NOx, but will definitely increase downwind.

Smog reduction strategies need to take account of the geography and meteorology of the region being considered. For example, efforts to address ground level ozone through reduction in hydrocarbon emissions worked well in Los Angeles but not in Atlanta, primarily because Atlanta has extensive tree cover, resulting in significant natural sources of hydrocarbons. In the Greater Toronto Area (GTA), the Great Lakes and relatively flat terrain, as well as local weather patterns, all affect the ground level ozone situation. We need to consider the unique geographic and meterological characteristics of the GTA in developing smog reduction plans. We need to ensure that Ontario has up-to-date data through modelling, meteorological and technical studies. Data from SONTOS (Southern Ontario Oxidant Study) should be used. We are also focusing too much on ozone as it is easy to measure; we need to look more closely at other pollutants, such as organo-nitrates, which are highly toxic.

Dr. David Pengelly - Associate Professor, Medicine and Engineering Physics, McMaster University

Inhalable and respirable particulates present a significant problem from a health perspective.

Although we know less about particulate processes than we do for ozone, studies show the adverse effects of particles on health, in terms of hospital admissions and deaths. In particular, as the particle size decreases, the composition becomes more and more important and problematic. There is a particular problem with very small particles containing toxics, as these are received directly at the base of human lungs. Larger particles are also a problem. Evidence shows that more deaths can be attributed to particles than ozone. There is no safe level for population exposure to particulates or ozone. We should emphasize the issue of inflammation of the "airways" due to ozone.

Currently, monitoring sites are located close to Lake Ontario and in areas of higher population. We need additional sites in other locations. We should maintain the existing air monitoring network, and focus specifically on sulphates.

Dr. Ian MacLusky - Respirologist, Hospital for Sick Children

With particulates, there is no acceptable risk or tolerable exposure level when you consider human health. This is particularly true for: asthmatics; and young children, whose lungs are still developing. Evidence shows: hospital cardiac and respiratory admissions rising as smog increases; the incidence of asthma is increasing, particularly in children; increases in chronic airway inflammation and impacts on lung development. Our bodies were not designed to deal with today's pollutants. Much more must be done to control pollutants, particularly the smaller particulates that are causing chronic airway inflammation.

Mr. John Mills - Regional Director General, Environment Canada, Ontario Region

Smog is a very complex problem to address -- technically, scientifically and jurisdictionally. As such, partnerships are at the heart of the federal approach for addressing smog. Environment Canada is working with the provinces and stakeholders to develop a Smog Management Plan, which will be comprised of: a National Smog Management Plan and four regional plans; ongoing initiatives for control of stationary sources; new initiatives for cleaner fuels and vehicles; and public education initiatives. The federal science program is providing quantitative scientific and technical information to feed into the national and regional smog plans, and is identifying data gaps.

In terms of transboundary issues, Environment Canada is involved in discussions with the U.S. regarding the Air Quality Accord, Regional Ozone Study Areas and the Ozone Transport Commission, among other initiatives. Key considerations for Ontario and Canada are to "get our own house in order" and "have clean hands" to provide a sound basis for future discussions with the United States.

3.2 A Base on Which to Build - Sectoral Success Stories

On each day of the workshop, panellists from industry and municipal government provided participants with their perspectives on how to overcome barriers and achieve success in taking action on smog.

Mr. Ian Service - Loss Prevention Department, 3M Canada

3M's commitment to operating in an environmentally responsible manner is rooted in the company's Environmental Conservation Policy. Since 1990, 3M has focused on reducing VOC emissions and has reduced its emissions by 81% since that time. Their target is to reduce total emissions by 90% by the year 2000, and achieve as close as possible to zero emissions in the next century. The key to this success and other environmental achievements has been corporate commitment. This commitment encompasses corporate willingness to seek innovation and continuous improvement. Environmental programs are mandated and achievements measured. In addition, results are reported annually and published in the community.

Councillor Joan King - Municipality of Metropolitan Toronto

Smog is an urban issue which requires an holistic, all-encompassing approach to solve. In the GTA, this means involving politicians and representatives from all municipalities, a wide range of stakeholder organizations and the public to work on the problem and develop a plan of action. Metropolitan Toronto's Blue Ribbon Committee has taken this inclusive approach, and has gained broad-based support and momentum to take action on the smog issue at the municipal level. A key for the Blue Ribbon Committee has been to prioritize actions that should be implemented quickly, such as a mandatory vehicle inspection and maintenance program. In addition, the Committee has developed a Resolution which municipalities can adopt to initiate action on smog reduction. GTA municipalities are ready and willing to take action, both within their own jurisdictions and in partnership with the province.

Mr. Tass Eilert - Manager, Environmental Activities, Autoplex, GM of Canada

The Council of Canadian Ministers of the Environment (CCME) Management Plan for NOx and VOCs has worked particularly well in some sectors. For example, CCME sub-sectors V307 and V612 have worked collaboratively to achieve substantial VOC reductions in the area of surface coatings. Total VOC emissions in this area have been reduced by 42.5% based on 1985 emission levels.

Commissioner Jim Thoms, Regional Municipality of Hamilton-Wentworth

The Regional Municipality of Hamilton-Wentworth has developed a plan, Vision 2020, to become a sustainable region by the next century. The plan was developed through an extensive community involvement program to ensure that the community's vision, values and preferences were included. Vision 2020 has received international recognition -- Hamilton-Wentworth has been designated as an Agenda 21 community by the United Nations. While the Region has received accolades for its plan, the key to success is the inclusive process that was followed. A good process builds commitment to implement the plan and ensures community recognition and support.

Mr. Tom Hewitt - Imperial Oil Limited

The Canadian Petroleum Products Institute represents major Canadian petroleum refiners, encompassing 200 bulk plants, 3000 service stations and 120,000 employees (direct and indirect). To address smog, CPPI companies have taken action on a number of fronts, including: reductions in gas volatility; reductions of NOx/VOCs at facilities through leak detection and repair, tank seal inspection and maintenance for storage tanks, and low NOx burners for boilers and process heaters. Initiatives are also under way to reduce VOCs in gas distribution through measures to control vapours (from bulk plant to trucks and from trucks to pumps). This will achieve a reduction of 19 kt of VOCs at a cost of $30 million. CPPI is also planning a $1 million study on particulate matter, in partnership with provincial and federal governments. A key consideration for CPPI members are the cost implications of future improvements, in view of the "law of diminishing returns".

Dr. Erik Haites - Margaree Consultants Inc.

The PERT (Pilot Emission Reduction Trading) program is a voluntary, industry-led initiative to demonstrate that NOx/VOCs can be reduced through emissions credit trading. PERT is modelled on U.S. demonstration projects and is similar to the Environmental Protection Agency's open market trading system. Companies participating in PERT can create credits by exceeding regulatory requirements. These credits may be "banked" for future use or sold to other companies as a means of recovering the costs of achieving higher reductions. Buying credits is an alternative to investing in on-site reductions. The credit trading system offers many potential advantages for industry in that it is efficient, affordable, flexible and simple. It is also preferred over point-source regulation because it addresses the full inventory of emissions over a broad geographic area.

Mr. Mike Rochon - M&R Chemical Specialties

In conjunction with the Lung Association, work is ongoing to develop a multi-purpose cleaner to replace cleaners emitting VOCs using hydrogen peroxide and other components in complex mixtures. The objective was to develop a low emission cleaner without VOCs. During the 3M Vapour Badge Test, the product, Hydrox Envirodesic Cleaner, achieved the lowest measurable emissions. The product is useful for domestic, institutional and industrial cleaning. Now many cleaning operations do not require cleaners that emit VOCs. There has been a good response from school boards, parents with small children and individuals with chemical sensitivities.

Mr. Steve Quinn - President - ProtectAir

ProtectAir is running Ontario's vehicle inspection and maintenance pilot project, which is funded by MOEE and Ontario Ministry of Transportation. Last year, over 15,000 cars were tested as part of the program, which offers numerous benefits: cars last longer, less gas is used, savings accrue in health and environmental costs. The key to success for vehicle emission testing is marketing the concept to obtain buy-in from the public. The message needs to be conveyed that we must all take responsibility for the problems due to vehicle emissions and become part of the solution. Inspection and maintenance is at the heart of this solution. There are good examples of how buy-in from the public has been obtained, such as the Blue Box. A similar social marketing initiative is needed for inspection and maintenance. For example, $9 million total is being spent on public education in Georgia - $5 million over the next two years. There is now a window of opportunity for social marketing on an I&M program in view of the Minister of Environment and Energy's commitment to propose such a program to Cabinet.

3.3 Enhancing Our Data and Information Base

As a starting point for the workshop, the MOEE prepared a compilation of contemporary scientific and technical data and information relating to the smog issue. This information and data were presented in the *"Supporting Document for Towards a Smog Plan for Ontario - a Discussion Paper"*.

During the workshop, participants identified areas where additional information or data are needed. In particular, much less is known about particulate matter, particularly in terms of emissions and risk. Enhancing IP/RP data and information sources, primarily through enhanced monitoring, was identified as a priority.

Additional ideas for data/information sources identified by participants included:

- Environment Canada data on sources for PM_{10} and $PM_{2.5}$;

- effects of temperature/meteorology on smog creation and composition;
- results of studies on the relative reactivity of hydrocarbons;
- projections for automobile trips in the future;
- best available information from the sectors on the costs of implementing smog reduction options;
- company and sector emissions data;
- SONTOS (Southern Ontario Oxidant Study) 1992 and 1994.

4. Where Do We Want to Be in the Future?

4.1 A Commitment to Collaborative Action on Smog

During the workshop, participants expressed a strong willingness to work together and share information to develop Ontario's Smog Plan. A clear sense emerged from the meeting that while many stakeholders are now involved in smog reduction initiatives, additional actions are needed to address the problem and *all* stakeholders from each sector of society need to be involved. The time for collective action is now.

Many participants expressed verbal support for the smog initiative, noting that the proposed partnership approach presents an exciting, innovative mechanism for collaborative action on smog. Over 40 stakeholders indicated an interest in participating in a sectoral work group, either by completing the *Work Group Recruitment Form* at the workshop or the *Facilitator's FaxBack* prior to the meeting. Other stakeholders noted that they would need to obtain approval from their company, agency, association and organization to participate further.

4.2 Towards a Goal and Targets for Smog Reduction in Ontario

In *"Towards a Smog Plan for Ontario: A Discussion Paper"*, the Ontario Ministry of Environment and Energy proposed a set of goals and objectives *(Discussion Paper, page 2)*, as follows:

1997 Initiate reductions of Ontario nitrogen oxides and volatile organic compounds annual emissions, to attain a 45 per cent reduction of the 1990 emissions by 2015, leading towards the reduction of ground level ozone in Ontario.

1997 Initiate additional actions to reduce emissions that contribute to inhalable and respirable particulates by at least 10 per cent by 2015.

1997 Establish inhalable and respirable particulate ambient air quality criteria.

1998 Develop a comprehensive Ontario particulate reduction strategy.

Ongoing Advance negotiations with the United States to attain nitrogen oxides and volatile organic compound reductions that are compatible with Ontario's goals.

Workshop participants discussed the feasibility of these goals and it became clear that to improve the health of Ontarians, and address the health effects caused by smog, the following ingredients could be reflected in Ontario's goal:

- commitments by stakeholders to strive toward the most achievable reductions;
- milestones should be built in along the way, with progress measures;
- we need to act now and work with what we have to achieve the best "bang for the buck";
- build in continuous learning and continuous improvement to the process;
- include economic achievability and cost-effectiveness to ensure a "level playing field" for Ontario business and industry - both domestically and internationally;
- specific targets should be determined based on a scientifically rigorous approach;
- a sector-by-sector approach to developing reduction targets would combine to create Ontario's overall goal;
- a collaborative, collective and public process, reflecting each and every Ontarian responsible for contributing to the smog problem;
- the year 2015 is too far off in the future to enable meaningful planning - business planning cycles should be used to set time-frames;
- enhanced partnership with the United States.

An explicit percentage reduction target for NOx, VOC, IP/RP reductions was thought to be helpful *after* the sectoral action plans had been developed. Some participants thought that the goal for Ontario could be to meet the "Ambient Air Quality Standards" for ozone. Criteria need to be developed as soon as possible for particulates.

Generally, there was support for an aggressive set of goals for Ontario, built from what sectors could realistically achieve, and based on a fair and equitable approach. Whether it is 45% for NOx/VOCs, or higher or lower appeared to be a premature discussion, one which should take place after sectoral deliberations had been undertaken.

Common Themes Relating to Goal-Setting

- Much more data, including risk assessments and sources are needed on particulates before a credible target for IP/RP can be set. This would not detract from the need to expedite the approach to IP/RP, due to the clear health effects caused by IP/RP, particularly in young children.

- Sector specific analyses need to be done, since some sectors/companies can reduce smog components relatively easily at a relatively low cost, while other sector/companies may have great difficulty and face extraordinary and unpalatable costs.

- Goals and milestones need to be tied to business planning cycles.

- The process needs to reflect the reality - we need a rationale way of planning, we need to know who emits what, and we need a rigorous process for measuring.

- Multi-pronged strategies, including incentives, tools, conditions must be included for the approach to be workable.

4.3 Obstacles and Strategies to Overcome Them

Throughout the workshop, participants identified and discussed obstacles to achieving further smog reduction, as well as potential strategies for overcoming these barriers. The table below provides an overview of obstacles and strategies raised frequently during the workshop. For a more complete list of obstacles and strategies, please see the newsletter, *Action on Smog*, in Appendix C.

OBSTACLES TO SMOG REDUCTION	STRATEGIES TO OVERCOME OBSTACLES
U.S contribution to Ontario's smog problem	• get Ontario's "house in order" • expedite binational agreements to harmonize standards, targets
Costs to business and industry to implement reduction measures; cost inequalities between sectors; competitiveness; equity	• incentives to reward reducers • sectoral or inter-sectoral emission trading • marketing of the issue and the solution • strive to ensure all stakeholders participate (not just large companies and associations)

OBSTACLES TO SMOG REDUCTION	STRATEGIES TO OVERCOME OBSTACLES
Our "automobile-focused" society and lifestyle	• public education • better mass transit; travel demand management • mandatory vehicle inspection and maintenance program (including heavy duty vehicles) • car-free downtowns; restrictions on car use; bike lanes; toll booths • cleaner fuels; fuel reformulation; regulation of low sulphur diesel fuel; mandatory requirements for use of alternative fuels in new government vehicle fleet purchases
Government policy	• MOEE should take a lead role in encouraging, promoting and developing green industry • more dialogue between ministries on cross-cutting policy issues
For IP/RP, lack of knowledge, information, data	• prioritize research on IP/RP
Lack of corporate and political leadership	• get early buy-in from senior management and Cabinet management

5. Moving Forward - Area Work Group Action Plan Frameworks

On the second day of the workshop, participants convened in four broad sectoral breakout sessions. These included:

- Transportation;
- Heavy Industry and Energy Services;
- Manufacturing and Consumer Products; and
- Public Education and Government.

The purpose of the breakout sessions was to develop action plan frameworks which would be most appropriate and useful for developing smog reduction action plans in these broad sector areas. The breakouts also provided recommendations regarding the process for developing Ontario's Smog Plan (please see Section 6).

5.1 Success Factors for Action Planning

As an initial step in developing action plan frameworks, each sectoral breakout identified elements which characterize successful action planning exercises. These "success factors" were based on participants' experiences with action planning processes in the past, including processes which have worked well and those which did not. The following is a synthesis of the action planning "success factors" identified by the four breakout groups:

Success Factors

An effective action planning framework...

- has a *clearly articulated process*, complete with:
  - a clear problem definition
  - clear goal(s) and objectives
  - anticipated outcomes
  - realistic time-lines
  - regular progress reporting
  - measures of success
  - milestones.

- is *simple* and understandable - by participating organizations, external observers and the public.

- is *fair and equitable* for participants, within and between sectors, taking account of

competitiveness both nationally and internationally.

- is *inclusive* in that all stakeholders from each sector are involved, and opportunities for *public input* are provided.
- offers and communicates *incentives* and *benefits* to maximize participation within and among sectors.
- ensures *accountability*.
- is *flexible*, enabling continuous improvement, iterations and re-iterations where necessary, and adaptive management.
- has senior-level, enduring *commitment and buy-in* by participating organizations.
- encourages *leadership* within sectors ("sectoral champions") and between sectors ("process champions").
- offers *added value* in that it identifies, incorporates and builds on existing initiatives, such that past efforts are not duplicated.
- facilitates and encourages open, two-way *communication* both among participating organizations and sectors, and with external bodies and the public.
- has *public support* and is backed by *political will*.
- uses *common currency* (terms, definitions, inputs), which is understood and accepted by participating organizations.
- is *sustainable* - economically feasible and achievable, and backed by sufficient resources.
- takes a *multi-media* approach.
- is *integrated*, both with other similar initiatives at the international, federal, provincial, regional and local level, and with the long-term business and R&D planning cycles for industry and business.
- is based on *science* and *risk management* - quantifiable, verifiable, predictable.
- *celebrates* achievements and success, through rewards, recognition and communication.

One participant summarized an effective action planning framework as being SMART-A: specific, measurable, achievable, results-oriented, time-based - and accountable.

5.2 Transportation

Participants in the transportation breakout session included representatives from provincial and municipal government, industry and non-government organizations with an interest in transportation issues.

A Road Map for Transportation Sub-Sector Action Plans

Session participants developed a framework for transportation sector smog reduction action plans based on the action planning "success factors" identified by the group. In this framework, communication throughout each component step is essential, as is continually revisiting sub-sector targets as new information, technology and research become available. The framework process is non-linear, emphasizing opportunities for early implementation of smog reduction measures and actions, and reflecting the need for ongoing looping and review, and continuous improvement. There is also a need for flexibility to enable different sub-sectors and stakeholders to take action in a way which best meets their needs and circumstances.

1. Identify sub-sectors/categories and set targets

- sub-sectors/categories include:
  - vehicles
    - on-road including light duty and heavy duty vehicles
    - off-road including trains, ships, airplanes; recreational vehicles (e.g., all-terrain vehicles); commercial vehicles (e.g., agricultural machinery)
    - non-motorized vehicles
  - fuels (oil, natural gas, propane, ethanol, etc.)
  - consumer fuel-using products (e.g., lawnmowers, chainsaws, etc.)
  - municipalities
  - province

- in their plans, municipalities and the province can influence:
  - land-use planning
  - modal shift
  - demand management

- sub-sectors and all stakeholders within sub-sectors set goals which contribute to overall reductions by the transportation sector, and feed into Ontario's Smog Plan achievements

2a. Compile background information

- build, update and refine emission inventories
  - good data are now available for NOx/VOCs
  - begin addressing the data gaps: particulates, NOy, chemical species

2b Get senior level buy-in (in parallel with 2a) to process, goal(s)

[Steps 1 and 2 are do-able by all transportation sector stakeholders by end of October]

3. Quick start to plan development

- incorporate, continue existing smog reduction actions and initiatives
- identify short-, intermediate-, and long-term options, priorities

[Steps 1-3 are do-able by most transportation sector stakeholders by end of October]

4. Quantify effects of short-term options for each sub-sector

- obtain options from each sub-sector for short-term, easily achievable actions
- determine what can be done now - options which are cost-effective, economically feasible and which will meet the least resistance for implementation

5. Identify challenges and barriers for intermediate- and long-term options

- propose solutions and opportunities for overcoming barriers
- assess the political will necessary for removing barriers
- determine if removing barriers/implementing the option will achieve the overall purpose of smog reduction

6a. Analysis - decide on intermediate-, long-term options

- forecast and test the most promising options
- determine which options are most feasible - economically, socially, environmentally

6b. Revisit/revise goals (as appropriate)

7. Implement plan

8. Monitor and evaluate progress

- ozone exceedances could be a useful measure of progress
- further research is needed to determine how best to measure reductions in particulates

9. Review (continuously)

Next Steps

Participants stressed that considerable effort is needed to broaden participation within the transportation sub-sectors/categories (identified in Step 1 above) to ensure full and balanced participation from the sector in developing Ontario's Smog Plan. An "iterative follow-up" process should be commenced as soon as possible to increase awareness of and participation in the smog initiative. Participants set a mid-July meeting date to re-convene sector representatives to consider the next steps in action plan development for the transportation area work group.

5.3 Heavy Industry and Energy Services

Participants in the heavy industry and energy services breakout session included a wide range of industrial sector representatives (forest products, natural gas, steel producers, cement/concrete producers, chemical manufacturers, petroleum producers, electrical power generators, mining and smelting), as well as representatives from government agencies and environmental and health non-government organizations.

Sectoral Action Planning Framework

In considering an action planning framework for this diverse sector area, participants stressed that each sector knows best how to address emissions contributing to the smog problem from their sector. It was noted that if a given sector has an existing emission reductions plan, it will be able to move through the process much more quickly. It was also suggested that an emissions trading program would shorten the process.

Participants developed the following framework:

1. Consult with public

- understand public goals for air quality
- identify early actions

2. Bring sector together/get buy-in**

3. Assemble data and information**

- emissions and programs (NOx, VOCs, IP/RP, CCME, CIPEC, EPRI)
- use valid collection methods
- data collection must be appropriate to the task (e.g., not a MISA-like data collection exercise)

4a) Where data are adequate, assess emissions, identify potential reductions**

4b) Where data are not available, set up process to collect

5. Set targets where data will allow**

- involve the public in the area of local facilities

6. Develop sector action plans**

7. Review/refine action plans**

- peer review, public input

8. Start implementation**

9. Monitor and assess progress**

** Indicates two-way interaction with Steering Committee for Ontario's smog plan initiative.

5.4 Manufacturing and Consumer Products

The manufacturing and consumer products breakout session included participants from government agencies, industry and manufacturing, and non-government organizations.

An Action Planning Framework: The "Farmer Plan"

Participants developed the following framework for smog reduction action plans in the manufacturing and consumer products area, named after Jim Farmer - one of the framework's architects. The framework features constant communications, linking each one of its component steps. It is flexible, enabling iterations, reiterations, looping and continuous improvement.

Step	Responsibility
1. Why Bother? a) get buy-in (personal, spiritual, professional) from key parties - companies, customers, interest groups, banks, shareholders, etc. b) develop a process companies can live with *Key messages: we are making our children sick; the smog problem is costing us money; we are part of the problem; if we don't, government will*	Steering Committee
2. Statement of Sector/Company Support for Initiative a) emission inventory to identify sectoral input to the problem and to establish priorities (most reduction for best dollars) b) company CEO's sign statement to participate c) commitment to continuous improvement and cost-effective solutions d) information sharing to strengthen international competitiveness e) sectors must commit to working with sub-sectors and companies experiencing problems (i.e., get support for R&D; suggest government help with tax incentives for more smog reduction)	Sectoral

Step	Responsibility
3. Emission Diagram/Situational Analysis a) using good data, quantify emissions b) prioritize sources (#/$) c) identify reduction options - establish all potential realistic reduction options - conduct strategic option analysis (including business plan for each option) - accept or reject options based on acceptable goals d) rank options ($/tonne) e) improve inventory #s (especially for VOCs, IP/RP) and expand NPRI (mass balance) f) prepare detailed emission diagram for each sub-sector *Role of Associations: set template for data collection; collate data*	Sub-sector
4. Industry/Supplier Partnership to Make Process Change a) for sectors with many small sources, provide resources at association level to initiate action b) sectoral groups and Steering Committee should be prepared to provide guidance, access to expertise, R&D sources to solve problems which arise at sub-sector level c) many partnership combinations are possible: government/industry; industry/supplier; industry/industry; industry/consumers, etc. d) share technology e) activate vertical partnerships f) train customers *Larger companies can force suppliers to justify their products in terms of both cost and environmental impact*	Sub-sector

Step	Responsibility
5. Measurement Plan a) identify performance measure for selected options b) establish tracking system (protocols, time-lines) using good data (do not duplicate efforts, i.e., manufacturers of equipment do C of As?) c) identify appropriate method for financial analysis of options (standardize to the extent possible) d) define indicators e) ensure feedback to original plan f) require reporting of larger scope of emissions (rather than just NOx)	Sub-sector
6. Change the Process a) consider multi-media impacts b) effectiveness must be assessed and re-inputed to emissions diagram to determine value of entire process c) re-assessments should be repeated on a regular, continuous cycle d) each stakeholder defines individual process change; then iterate the resulting data to establish common reduction standard, etc.	Sub-sector
7. Market/Communicate Success Stories a) have associations, government agencies market success stories (use bulletins, annual reports, marketing literature, web home page) b) large companies can humanize/personalize with awards of distinction (within divisions, to teams, individual) c) all success stories should emphasize points which entice others to participate (waste reduction, profits, increased patronage, increased efficiency, etc.)	Sectoral
8. Get More Players/Companies Involved by Communicating Step #1. *Key messages: this is relevant to all levels, sectors; if you do not participate, someone will do it for you*	All

5.5 Public Education and Government

Participants in the public education and government session included representatives from all levels of government and health and environmental non-government organizations.

Action Plan Framework - Common Ingredients

Four variations on action plan frameworks for the public education and government sector were developed by participants in this session. Common ingredients in each of these frameworks included:

- Develop a mission statement/vision

- Get buy-in from senior management and key decision-makers
  - use timely marketing techniques to government and non-government decision-makers to obtain funding for "public acceptance" program
  - enlist an overall process "champion" and senior management "champions" to ensure commitment and adequate resources
  - government buy-in at Cabinet level
  - identify and contact other key participants

- Early implementation of key priorities and opportunities ("low hanging fruit")
  - begin as soon as possible with what you have and do what can be done immediately

- Identify/compile/assess available data
  - gather necessary additional data (e.g., IP/RP) (but continue early implementation in parallel)

- Set goals and milestones (based on well-researched, credible data)
  - develop indicators

- Develop and assess permanent measures

- Build public acceptance
  - leadership by process and senior management champions
  - media campaign (with less paper and simple vital messages)
  - communication between providers of public education, senior management, politicians and public
  - link to health issue

- Implement measures at appropriate time as public acceptance peaks
- Monitoring - revise, reconsider, reset goals as needed

Session participants stressed that flexibility is critical - opportunities for smog reduction must be seized as they arise. In addition, it is important not to wait to begin taking action. Smog reduction measures that can be implemented now should be done so.

6. Ontario's Smog Planning Process - Participants' Recommendations

The following provides a summary of participants' recommendations on the next steps in the development of Ontario's Smog Plan.

6.1 Key Process/Communication Needs

i) Provide information to stakeholders on the proposed next steps in the *process* to develop Ontario's Smog Plan (including clear process steps, time-lines and anticipated outcomes). This information should be provided as soon as possible.

ii) Communicate the links/harmonization between Ontario's Smog Plan initiative and other similar initiatives (e.g. the CCME NOx/VOCs process) at the international, federal, provincial, regional and local levels.

iii) Encourage stakeholders who require senior management approval/commitment for further participation in Smog Plan development to obtain this as soon as possible.

6.2 Role for Health, Public Education and Technical Experts

i) Provide an explicit role for experts from the following "cross-cutting" areas of expertise: health and environmental non-government organizations, science, communications/public education, technical/information/modellers. This can be accomplished through one or some combination of the following:

a) membership on the Steering Committee;
b) setting up a multi-disciplinary advisory body, which could provide advice and guidance to the area work groups and/or Steering Committee;
c) representatives from each "discipline"/cross-cutting area of expertise could participate in each work group.

Generally, it was suggested that these disciplines <u>not</u> be formed as a separate sector work group.

6.3 Smog Plan Steering Committee/Process Champion

i) Establish the Steering Committee as soon as possible, keeping it small, workable, and functional.

ii) The key role of Steering Committee should be leadership, communications/marketing (of the issue and process), coordination, and facilitation of information exchange.

iii) Consider the following options for Steering Committee composition:
   a) draw "sectoral champion(s)" from each work group area
   b) replace the Steering Committee with a small coordinating body (e.g., Multi-Industry Advisory Group) made up of major industrial sectors, health and environmental non-government organizations, science representatives

iv) Consider recruiting an overall process "champion" for the Smog Plan initiative.

6.4 Area Work Groups

i) Review the current division of sectors to ensure that overlap is minimized, such that stakeholders can easily determine where they "fit".

ii) Consider interspersing government and public education sector representatives amongst the other sectors.

iii) At the sector and sub-sector levels, let stakeholders determine how they want to organize themselves.

iv) Considerable effort needs to be made to broaden involvement by as many stakeholders as possible in each sector and within sub-sectors.

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Towards a Smog Plan for Ontario:
Workshop Agenda

June 19-20, 1996 – Howard Johnson Plaza Hotel, Toronto – 475 Yonge St., (416) 924-0611

Workshop Purpose: **To develop a goal for smog reduction in Ontario by 2015 and outline a framework and approach to developing sectoral Smog Plans.** ***This goal will be achieved through sharing ideas, identifying challenges and opportunities for reducing smog.***

DAY 1: **WHERE ARE WE NOW? WHERE DO WE WANT TO BE IN THE FUTURE?**

8:00 am — Registration and Coffee

8:45 am — **Morning Plenary**
The Context and the Challenge: Presentation of the Smog Problems and Discussion of Issues

Agenda Item #1: — **Welcome and Opening Remarks -**
Page 8
Ms Helle Tosine, Workshop Chair
The Honourable Brenda Elliott, Minister of Environment and Energy, Ontario.
- Smog Plan Process Overview

Agenda Item #2: — **Panel Presentations and Discussion -**
Page 12
Mr. Mark Nantais - Panel Chair, President, Motor Vehicle Manufacturers' Association
Dr. Harold Schiff - President, Unisearch
Dr. David Pengelly - Associate Professor, Medicine and Engineering Physics, McMaster University
Dr. Ian MacLusky - Respirologist, Hospital for Sick Children
Mr. John Mills - Regional Director General, Environment Canada, Ontario Region

Presentation of the Smog Problem
- Discussion with panellists

Agenda Item #3: — **Discussion Paper and Supporting Document - Discussion**
page 13

12:00 pm — Lunch

Agenda Item #4: — **Success Stories and Examples Applied by Sectoral Leaders - Approaches to Overcoming Barriers**

12:45 pm — *Session Chair - Mr. Ken Ogilvie, Executive Director, Pollution Probe*
Page 14
Mr. Ian Service, Loss Prevention Department, 3M Canada Inc.
Councillor Joan King, Municipality of Metropolitan Toronto
Mr. Tass Eilert, Manager, Environmental Activities - Autoplex, GM of Canada
Commissioner Jim Thoms, Regional Municipality of Hamilton-Wentworth

Agenda Item #5: — **Multi-sectoral Breakout Sessions - Smog Reduction Planning**

1:45 pm — - Where does Ontario want to be in the future? — - How far have we come?
Page 15 — - Where are we now? — - Where to from here?

Process to reach Ontario Smog Plan
(Discussions on successes, obstacles and opportunities)

Agenda Item #6: — **Reporting Plenary** - *Highlights of where we want to be*
4:30 pm
Page 17

5:00 pm — Day 1 adjourns

Agenda Item #7: — **Optional Discussions** - *detailed questions/information regarding the*
5:00-6:00 pm — *Discussion Document*
page 19

An overnight newsletter will be prepared containing Workshop Highlights from Day 1

DAY 2:	A FRAMEWORK FOR MOVING FORWARD
8:00 am	Coffee, newsletter available
Agenda Item #8: 8:30 am page 22	**Morning Plenary** - *Charge to Breakout Groups on Developing Sectoral Plans*
Agenda Item #9: 9:00 am page 23	**Sectoral Breakout Sessions** - *Sectoral Action Plans for Smog Reduction* - Options, solutions, ideas, proposals - Framework for a Smog Reduction Action Plan - approaches to developing sectoral plans
12:00 pm	Lunch
Agenda Item #10: 12:45 pm *page 28*	More Success Stories *Session Chair - Mr. Bruce Orr, Manager Public Policy and Regulatory Affairs, Imperial Oil Ltd.* *Mr. Tom Hewitt, Imperial Oil Ltd.* *Dr. Erik Haites, Margaree Consultants Inc.* *Mr. Mike Roshan, President, MNR Chemical Specialities* *Mr. Steve Quinn, President, ProtectAir*
1:45 pm	**Breakouts (continued)**
Agenda Item #11: 4:00 page 29	**Reporting Plenary** - *A Framework for Moving Forward: Synthesis and Discussion* *Sally Leppard, LURA Group* Outcomes from the Workshop Ways and means to meet the target Can we work together towards a Plan?
4:30	Summary and Next Steps - *Ms Helle Tosine, Workshop Chair*
5:00 pm	Workshop adjourns

Towards a Smog Plan for Ontario Workshop - June 19 & 20, 1995
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ACTION ON SMOG

Towards a Smog Plan for Ontario — June 19, 1996

ONTARIO LAUNCHES SMOG REDUCTION PLANNING PROCESS:

Leaders want to work together and act soon to improve air quality.

Over 175 community, business and government leaders met together today to share information, learn from successes and seed a "made-in-Ontario" planning process for smog reduction.

At the conference, kicked off by Environment and Energy Minister Brenda Elliott, the group was challenged to work together to find solutions, make commitments and meet the challenge. The Minister launched a five-step process for the development and implementation of Ontario's own smog plan - which will feed into the National Plan being developed by the Canadian Council of Ministers of the Environment chaired by the Minister.

A well-received highlight of the Minister's speech was her commitment to take a long-awaited Inspection and Maintenance program to Cabinet for consideration.

Five respected panellists shared their expertise in the manufacturing, health, government and science sectors with participants. Each endorsed Ontario's proposed collaborative approach to developing its Smog Plan.

WHAT THEY SAID...

The success of a collaborative process must be based on broad acceptance of technical, scientific and health data - and must be fair and equitable. (Mr. Mark Nantais)

Regional differences, lead to the development of different plans - what works in one area does not necessarily work in others. The Great Lakes play a significant role in the GTA's smog problem. Ensure that Ontario has the most up-to-date data. (Dr. Harold Schiff)

Inhalable and respirable particulates present a significant problem - and, as the particle sizes decrease, the composition of those particles also becomes a problem. We should emphasize the issue of inflammation of the "airways" due to Ozone. Keep air monitoring network going and concentrate on sulphate. (Dr. David Pengally)

With particulate, there is no acceptable level when it comes to human health - they cause a major problem for very young children whose lungs are still growing. The medical profession is taking a solutions-oriented approach, based on areas within its control - much must be done to ensure that smaller particulate are controlled as they cause chronic airway inflammation. (Dr. Ian MacLusky)

We don't fully understand smog yet, we need to understand the total "soup". But we are taking initiatives and developing knowledge. We must "have clean hands" when we talk to our neighbours south of the border. (Mr. John Mills)

AMONG OTHER ITEMS, WHAT'S MISSING FROM MOEE'S TECHNICAL REPORT?

Some ideas for additional information

- Environment Canada data on PM-10 and PM-2.5 - data on sources
- Heat effects/meteorological effects
- Work on relative reactivity of hydrocarbons
- Best information from sectors on costs of implementing options
- SANTOS 1992 and 1994

ELEMENTS OF SUCCESSFUL PLANS

Four "planners" presented their success stories in pollution prevention activities and initiating successful action plans.....

- For an industry, you need corporate commitment; programs within the company need to be mandated and achievements measured; results reported annually and published in the

community. Innovations and striving for continuous improvement are keys to success. *Mr. Ian Service - 3M Canada on 3M's leading environmental policies.*

- For the GTA, involve politicians from all municipalities, have a multi-stakeholder process develop the plan and initiate "quick start", early action items - such as a mandatory, enhanced inspection and maintenance program. Involve the public, and work together. *Councillor Joan King, Municipality of Metropolitan Toronto - on the Blue Ribbon Task Force*

- The sectoral approach works well - total emissions have declined by 42.5% since 1985. *Mr. Tass Eilert - General Motors of Canada - on the collaborative approach designed by CCME sub-sectors V307 and V612 for VOC reductions in surface coatings.*

- A good process builds commitment to implementation - involving key stakeholders and the community ensures community recognition of the plan. During implementation, "people almost didn't notice it was happening". *Mr. Jim Thoms, Commissioner, Regional Municipality of Hamilton Wentworth.*

ABOUT A GOAL FOR SMOG REDUCTION

The Ontario Ministry of Environment and Energy proposed a smog reduction goal for Ontario of 45% for NOx and VOC and 10%+ for particulate. Participants discussed the feasibility of this goal and it became clear that: to improve the health of Ontarians, and address the health effects caused by smog, the following ingredients could be reflected in Ontario's goal:

- commitments to strive toward the most achievable reductions
- goals should be determined based on a scientifically rigorous approach
- milestones should be built in along the way, with progress measures
- act now and work with what we have to achieve the best "bang for the buck"
- build in continuous learning and continuous improvement to the Plan
- include economic achievability to ensure a "level playing field" for Ontario business
- a sector-by-sector approach to developing reduction targets would combine to create Ontario's goal
- a collaborative, collective and public process, reflecting the 8.9 million Ontarians who are responsible for smog
- enhance partnership with the United States

An explicit goal or target for NOx, VOC, IP/RP reductions was thought to be helpful after the sectoral action plans had been developed. Some participants thought that the goal for Ontario could be to meet the "Ambient Air Quality Standards" for NOx and VOC. Criteria need to be developed for particulate.

Generally, there was support for an aggressive set of goals for Ontario, built from what sectors could realistically achieve, based on a fair and equitable approach. Whether it is 45%, higher or lower appeared to be a premature discussion, one which should take place after sectoral deliberations had been undertaken.

COMMON SESSION THEMES:

- Much more data, including risk assessments and sources are needed on particulate before a credible goal can be set. This would not detract from the need to expedite the approach to IP/RP, due to the clear health effects caused by IP/RP, particularly in young children.
- Sector specific analyses need to be done, since some sectors/companies can reduce smog components relatively easily at a relatively low cost, while other sector/companies may have great difficulty and face extraordinary and unpalatable costs.
- Goals and milestones need to be tied to business cycles
- The process needs to reflect the reality - we need a rationale way of planning, know who emits what and a rigorous process for measuring.
- Multi-pronged strategies, including incentives, tools, conditions must be included for the approach to be workable.

IN THE HALLS...

"It's premature"
"We don't have the information"
"It must be economically achievable"
"We must know who and what we're protecting"
"There is no threshold for smog"
"A goal is good, we can always change it."
"Let's act now and work with what we have, striving for continuous improvement"

QUOTE OF THE DAY... "We are counting on a strong and effective partnership"

- Hon. Brenda Elliott

BREAKOUT GROUP REPORTS

BREAKOUT GROUP #1 (CLARENDON ROOM)

Goals

- General agreement that MOEE goals are not ambitious enough. Targets should be maximized.

Constraints

- Current taxation system.
- Inequalities between sectors in terms of cost - competitiveness.
- Lack sector-by-sector emissions inventory.
- American standards.
- Effects of geography, meteorology.
- Our "automobile culture" and lifestyle.
- Current government policies.
- Lack corporate and political leadership.

Strategies

- Inter-sectoral emission trading.
- Incentives to reward emission reducers.
- More research on IP/RP.
- Maintenance and monitoring network.
- An integrated GTA transit system.
- Cleaner fuels.
- Car-free downtowns; restrictions on car use; more bike lanes; toll booths
- Reporting hot-line for polluters.
- Continuous improvement.
- Harmonization with other jurisdictions (e.g. US).
- Inspection and maintenance program - including diesel vehicles.
- Vehicle salvage program.
- Implement all CCME guidelines.
- More dialogue between government ministries.
- Regulation of low sulphur diesel fuel.
- Mandatory levels for alternative fuels in new government vehicle fleet purchases.

BREAKOUT GROUP #2 (WELLINGTON ROOM)

Goals

- Most support setting a goal for NOx/VOCs. Many feel 45% is achievable, while a few feel 45% should be a minimum target. Several others are unsure whether 45% is an appropriate goal. For example, will it result in cleaner air?
- For IP/RP, opinion was divided. Some feel we should set a goal (such as 10%) to get the ball rolling. This goal can be refined later as new information emerges. Others believe we don't have enough information to set a goal. In particular, we lack baseline data on health effects and emissions. It was also suggested that IP/RP should be addressed nationally first.
- Some suggest that the key is collective sector-by-sector actions to address the smog problem. With this approach, an overall provincial goal is much less important or irrelevant. Sectors could set their own goals on a regional or airshed basis. The key here is flexibility and the ability to make adjustments as you go. Goals could be adjusted as new technology emerges.
- Common themes relating to goal-setting and achievement:
  - need to continuously link progress toward goals with health outcomes;
  - keep in mind the international aspects of the smog issue (impact of US emissions on Canadian airsheds; need for Canadian industries to remain competitive);
  - set milestone or interim targets to maintain momentum;
  - set priorities - go for options first that give biggest bang for the buck
  - need modelling expertise to check progress;
  - incorporate new research, data as these become available;
  - stress continuous improvement;

Constraints

- We lack knowledge about IP/RP. What are the sources? What are the controls for PM10? Is all of PM10 equally important (speciation issue)?
- We need a level playing field: in each sector; internationally.
- Dollar return in health savings must be demonstrably greater than the investment.

Strategies

- Expedite international agreements.
- Use public policy to address key concerns, e.g. mass transit.
- Involve all stakeholders, including the general public. There are 9 million stakeholders for Ontario's Smog Plan.
- Ensure all industries are reached - not just large

ones and association members. Develop incentives to maximize participation.
- Consider emission trading between sectors.
- Include other contributors to smog problem (e.g. Pan, photochemical pollutants.

BREAKOUT GROUP #3 (YORKSHIRE ROOM)

Goals

- For IP/RP, there was a lack of comfort with any numerical target. It is not possible to set a target given a lack of baseline data and information on sources. We should:
  1. set IP/RP ambient criteria first, taking economic factors and sources into account;
  2. see what acid rain and other NOx/VOCs programs are achieving in reducing IP/RP;
  3. work with the US to set targets for IP/RP.
  4. initiate action as soon as possible (e.g. cut sulphur in diesel fuel.

- For NOx/VOCs, 45% may be doable for VOCs in some sectors (e.g. automotive, petroleum), but not in others. NOx may be difficult in many sectors. Need to do a sector-by-sector analysis to see what is doable, then set a target. Concern was expressed about 25 year time span (re. business cycle). Concern was raised about the database in MOEE's technical document:
  - does not include all forecasted reductions;
  - does it include new cars/lower emissions?
  - needs to be revised with sector input.

Strategies

- Take action now.
- Mandatory inspection and maintenance program (including heavy duty vehicles).
- Fuel reformulation.
- Travel demand management - transit, car use.
- Intensification of urban form.
- Synchronize traffic lights.
- Public education - communicate that we're all part of the problem, and the solution.
- Give GTA regulatory authority to deal with smog problems.

BREAKOUT GROUP #4 (OXFORD ROOM)

Goals

- Develop stronger partnerships with U.S.
- Need for baseline data check
- Know who and what we're protecting
- Strive for "As Much As Possible-Economically Achievable"
- Need a much higher goal for IP/RP - there is "no safe limit" - could implement these actions first
- The sum of a sector-by-sector approach equals Ontario total goal
- Ensure a level playing field for Ontario's businesses
- Continuous improvement - start now - use BACT-EA
- Strive to be the "best in the world"
- The goal should include people, plants and animals.
- Meeting Ambient Air Quality at all times is desirable, achievable is 75% reduction in exceedances.

For those groups who arrived at goals for NOx/VOC, they goals ranged from a "desirable" goal of between 45% and 100% with a minimum of 10% and maximum of 100% for particulate. The group calling for 100% reductions staged implementation of their goal, with 30% reduction of NOx/VOC over five years and 80% by 2015. For particulate, they thought 20% was achievable in 5 years and 90% plus over 20 years.

Constraints For NOx/VOC

- Economic growth
- Weather
- Planning and implementation realities make full reductions unrealistic - economics and technology coupled with lack of political will works against reductions
- Social attitudes
- High costs - sector specific
- Commitment needed - high level buy-in required
- Business moving to more lax areas
- Small generators not contributing to NPRI
- Emission or activity problem? Should mandatory inspection and maintenance be regional?
- Transboundary - U.S. has less stringent air quality standards
- Demographics/density in airshed
- Technical controls
- Improved understanding - monitoring/modelling
- Accountability in tracking

Strategies for NOx/VOC

- Yearly reporting - know where we are
- 45% reduction in what's produced overall; reduce what we can control

- As time frame increases, hurdles will reduce
- Mobilize public to get buy-in from high levels
- Give incentives for industry
- Increase mass transit tied to disincentives for driving cars (assign real cost)
- Consider medical costs
- Should set high goals to mobilize public early
- International strategies - all sectors - make it personal (e.g. future for children beyond 2015
- Use all and best available control technologies
- Targets should focus on health impacts
- Improve government consultation with U.S.
- Improve urban planning - transportation sources
- Need sector by sector guidelines - codes of practice
- Increase programs/research as required
- Re: accountability in tracking should be done on a facility basis - 3rd party review, e.g. EMS

Constraints for IP/RP

- Not enough understanding of the problem
- Planning and implementation realities make full reduction unrealistic - economics and technology coupled with lack of political will works against reductions
- More scientific study required - regarding health effects
- Separate IP from RP - different constraints
- Need milestones - 1, 2 and 5 years
- Use Best available technology - sector specific
- Ensure we don't transfer the problem by creating another
- Need risk assessment

Strategies for IP/RP

- Need more data
- As time frame increases, hurdles will reduce
- Scientific study needed on health effects/risk assessments

The contents of this newsletter reflect the facilitators' perspectives of the Workshop. A full workshop report will be provided.

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NOTES:

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